INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. The Disinfection and Hardening of Rubber Drains. By DR. JAVARS. Rubber drains, prepared in antiseptic solutions or disinfected by boiling, are thereby rendered so soft as to be easily rendered useless for the time being by slight pressure upon them by surrounding tissues. He suggests hardening them as follows: The orange red variety is best adapted to the process. The tubes are placed for about 5 minutes in concentrated sulphuric acid, the large sizes requiring a rather longer immersion. They are then washed in 75% alcohol and placed in a 5% solution of carbolic acid, or a 1-2000 solution of mercuric bichloride. Tubes thus prepared will withstand a considerable amount of pressure. If they become harder than desirable, rolling them for a few moments between the thumb and fingers will soften them. Tubes thus prepared have maintained their lumen intact even when placed in the intercostal spaces for empyema.—*Centralblatt f. Chirurgie*, 1888, No. 33.

II. The Antiseptic Protection of Iodoform Collodion. By HANS SCHMID. The wound is first firmly sutured after proper disinfection by buried sutures of catgut, the integumentary margins being drawn together by silk sutures, and covered with iodoform collodion. Deep suturing in some instances may be omitted. Drainage is never employed and the question is raised as to whether the methods of drainage commonly employed are not frequently inefficient, and occasionally harmful. Buried sutures replace compression. Those not adepts in antiseptic technique will do better not to suture the wound at all, but tampon with iodoform gauze and rely upon secondary suture, or union by second intention. The cases in which drainage can be omitted, and the iodoform collodion applied will suggest themselves at once. The method is particularly applicable to wounds of the face and scalp, plastic operations, wounds of the fingers, operations upon the penis, phymosis, etc. The crust is not disturbed for from 10 to 14 days. Fingers should not be encircled with the iodoform collodion for fear of endangering their nutrition.—*Centralblatt f. Chirurgie*, No. 19, 1888.

III. Further Researches upon the Origin of Suppuration; its Relations to Ptomaines and to Blood Coagulation. By PROF. SCHEUERLEN. The author made a putrid infusion of rabbit's flesh by treating the same in water at a temperature of 25° C. It was then freed from albumen by heat, filtered and evaporated to 10 ccm. This injected under the skin of rabbits gave rise to but slight symptoms, but increased temperature. The same fluid, sterilized in small closed glass tubes, and broken in situ at the end of 3 weeks, excited at first no noticeable reaction externally; but after a further sojourn of 3 or 4 weeks in the tissues, the tube was found to be surrounded by a firm connective tissue capsule and isolated from the remaining opaque infusion in the middle of the tube with a yellowish white, pulpy substance of 3 or 4 mm. thickness. This substance proved, upon microscopical examination, to be pus, but contained no micro-organisms. This suppuration differed from that produced by an organized agent in that in no single experiment did it have a progressive tendency to penetrate further into the tissues.

A second experiment with 3 parts of the putrid meat infusion and 1 pint of blood resulted in prevention of coagulation of the blood.

In a third series of experiments, Scheuerlen prepared 30 pure cultures of staphylococcus pyogenes aureus and albus,upon agar-agar gelatine with an extract of meat obtained by percolation with hot water, and evaporating from 150 ccm. to 8 ccm. in a water bath. This, after sterilization, was introduced under a rabbit's skin in the same manner as in the above experiments, and resulted in precisely the same manner both as regards the suppuration and the prevention of coagulation.

It is shown by these experiments that a pure culture of staphylococcus pyogenes aureus as well as albus produces a decomposition product, which arrests coagulation of blood and causes suppuration.